

Date: Tue, 19 Apr 94 04:30:10 PDT
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: Bulk
Subject: Ham-Ant Digest V94 #111
To: Ham-Ant

Ham-Ant Digest Tue, 19 Apr 94 Volume 94 : Issue 111

Today's Topics:

4/5-band trap dipoles--are they good?
 Basic antenna
 Best city antenna
Formula for determining optimum distance between
Is that all there is to a G5RV?
 lightpole as antenna?
Mininec help file now available!
Need recommendations on building an HF beam antenna
Slot antennas on cars? (2 msgs)
Strange Coax Problem (3 msgs)
TH6DXX update to TH7DXX ?
 Will this work??

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 15 Apr 94 04:50:23 GMT
From: agate!howland.reston.ans.net!gatech!newsxfer.itd.umich.edu!nntp.cs.ubc.ca!
cyber2.cyberstore.ca!nwnexus!NewsWatcher!user@ucbvax.berkeley.edu
Subject: 4/5-band trap dipoles--are they good?
To: ham-ant@ucsd.edu

I am thinking of putting together one of the single-trap-set
multi-band dipoles described in the "ARRL Antenna Book"
(on pages 7-10 and 7-11). Has anyone built them, and if so,
how well do they work (did you buy or make parts)? Also I
would appreciate some info on tuning and matching adventures.

Best to answer by email "gaponoff@halcyon.com". Thanks.

73 DE ??7?? (license pending, 6 weeks and waiting...)

Mark Gaponoff

Date: 19 Apr 94 17:03:48 GMT
From: dog.ee.lbl.gov!ihnp4.ucsd.edu!munnari.oz.au!pellew.ntu.edu.au!
rohan@ucbvax.berkeley.edu
Subject: Basic antenna
To: ham-ant@ucsd.edu

Can someone mail me the FAQ from this newsgroup please ?

I want the FAQ because I feel the followin question is probably
a frequently asked one.

What do I need to make a basic, cheap transmitting antenna. I want to be able
to transmit possibly FM, but probably AM, to a distance of approx 5km radius.

Is it only possible to buy such beasties from commercial hardware stores, or
can a simpleton like myself wack one together ?

Please reply by email if possible.

Rohan
rohan@dme.nt.gov.au
--
"Bzzt" - computer

Date: 19 Apr 94 06:01:10 GMT
From: dog.ee.lbl.gov!ihnp4.ucsd.edu!library.ucla.edu!news.ucdavis.edu!
chip.ucdavis.edu!ez041502@ucbvax.berkeley.edu
Subject: Best city antenna
To: ham-ant@ucsd.edu

I remember reading in Popular science about a good city antenna
that sold for \$60. It was made by a company called RF Limited or
something like that. The antenna was called something 9500. I think it
used the Hi-Q chip. It was supposed to be great for city reception
(crowded airwaves and interference). Has anyone heard of this company?
How do I get in contact with them? And by the way, what's the best
antenna for picking up a San Francisco station in Davis? (And don't tell
me a roof mounted aerial antenna. I don't think my dorm would think

highly of me sticking things on their roof.) I know I can pick up Live 105. I did with an amplified antenna from Radio Shack but the reception was so poor the station kept going out on me.

Stan "Please don't flame me" Kwong

Date: Mon, 18 Apr 94 10:19:00 -0800
From: ihnp4.ucsd.edu!library.ucla.edu!csulb.edu!paris.ics.uci.edu!news.claremont.edu!kaiwan.com!ledge!bob.albert@network.ucsd.edu
Subject: Formula for determining optimum distance between
To: ham-ant@ucsd.edu

There is no formula for the spacing of elements in a yagi. In general, the closer the spacing, the higher the angle of radiation, the greater the gain, and the narrower the bandwidth.

So there is no optimum; you have to decide what is best for your modes of operation. Generally, 0.1 wavelength is considered close spacing and 0.2 or more is considered wide spacing.

73 DE K6DDX

Date: Mon, 18 Apr 1994 20:42:41 GMT
From: spsgate!mogate!newsgate!news@uunet.uu.net
Subject: Is that all there is to a G5RV?
To: ham-ant@ucsd.edu

In article <2oui27\$01q@hpscit.sc.hp.com> rkarlqu@scd.hp.com (Richard Karlquist) writes:

> In article <2oubvv\$raq@ornews.intel.com>,
> Jim Garver <zardo@ornews.intel.com> wrote:
> >
> >Go out and buy the ARRL Antenna Compendium, Vol. #1, and read the article
> >in there authored by Mr. Varney, AKA G5RV. This should clear up any
> >misunderstandings of his design.

>
> Unfortunately, this article creates new misunderstandings. I'm
> afraid G5RV has gotten in over his head here trying to explain
> antenna theory. If you want to know what a G5RV antenna really does,
> take a Smith chart and plot out the impedance using a graph of
> the input impedance of a dipole (found in many antenna texts).
> To whatever extent the G5RV works or does not work, it isn't
> for exactly the reasons G5RV gives.
> ...

Maxwell has a entire chapter (appendix?) in "Reflections" about the G5RV

antenna.

Mark AA7TA

Date: Mon, 18 Apr 1994 20:18:14 GMT
From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!howland.reston.ans.net!
europa.eng.gtefsd.com!uhog.mit.edu!nntp.club.cc.cmu.edu!cantaloupe.srv.cs.cmu.edu!
dolphin!ed@network.ucsd.edu
Subject: lightpole as antenna?
To: ham-ant@ucsd.edu

Question to you hfers...

Can a metal lightpole, bottom fed internally with 110v romex to light on top & held in ground by concrete be used as an antenna?

I would expect to have to decouple the romex using ferrite cores or something and add radials or grounding of some sort.

I intend to bottom feed the pole, a real close 5/8 at 6m I estimate.

Thoughts? Ideas? Experience with cemented in poles with internal 110V wiring?

Ed
N3 I.T.M In The Mail

Date: Tue, 19 Apr 1994 00:24:30 GMT
From: olivea!news.bu.edu!att-in!cbnewsm!jeffj@ames.arpa
Subject: Mininec help file now available!
To: ham-ant@ucsd.edu

There is a help file for Mininec now available at the following site;

filename: mininec_help.txt
in directory: /pub/rander/NEC
on: ftp.netcom.com

For those who don't know what Mininec is, it is a nice little antenna desing program. It will let you model everything from dipoles to yagi to rain gutters! It is a public domain program that comes with no doc's. Doc's are available from the goverment for about \$50 or more from what I understand. This help file will get you started on designing or analyzing various antennas. Also

included in the help file are sources for a couple articles on Mininec that will help you even further. For free this is great program!

This help file was posted on Compuserve as MININEC.HLP and was uploaded as part of Mininec to Genie as MININEC.ZIP. Both files are in the ham radio sections of both systems. Also Mininec is available on Compuserve as MININEC.ARC or as MININEC3.ARC.

73!

Jeff

--

Jeff Jones AB6MB | Vote out those who voted for the North American
jeffj@seeker.mystic.com | Free Trade Agreement!
Infolinc BBS 510-778-5929 |

Date: Mon, 18 Apr 1994 19:20:35 GMT
From: adobe!juventud.mv.us.adobe.com!user@decwrl.dec.com
Subject: Need recommendations on building an HF beam antenna
To: ham-ant@ucsd.edu

I'm interested in building a beam antenna for my new HF rig (Kenwood 850). After looking at the ARRL antenna book, I realized that I need some assistance. I have some space to put up an antenna on my roof, but the kind of multi-band HF antennas that are shown in the book are ENORMOUS. Some of them are about the area of my house!

Is there a better way? I think my neighbors will have a cow if I build the antenna that ate Los Gatos. Besides the obvious solution of stringing dipoles all over my yard (less unsightly, but not too feasible where I live), what kind of antenna would give good reception without dominating the landscape? Part 2 of this question is, where can I find a plan for building this antenna that has sufficient detail (I've never built one before).

Jonathan

Please send recommendations to jsjordan@adobe.com

Date: 18 Apr 94 19:14:43 GMT
From: hp-cv!hp-pcd!hpcvsnz!tomb@hplabs.hp.com
Subject: Slot antennas on cars?
To: ham-ant@ucsd.edu

Has anyone out there experimented with slot antennas on cars? There are several places you could make this work, but I was thinking of a slot formed from wire (or copper tape) placed at the top inside of the rear window. If anyone has experimented with this, I'd be interested in the results: impressions about performance transmitting and receiving, amount of RF in the passenger compartment, problems feeding the antenna, ... It seems like the dimensions are right for this to work as a "stealth" antenna on 2m and 440MHz, with vertical polarization.

73, K7ITM

Date: Mon, 18 Apr 1994 20:49:05 GMT
From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!convex!darwin.sura.net!
fconvx.ncifcrf.gov!mack@network.ucsd.edu
Subject: Slot antennas on cars?
To: ham-ant@ucsd.edu

In article <CoGysK.7rt@hpcvsnz.cv.hp.com> tomb@lsid.hp.com (Tom Bruhns) writes:
>Has anyone out there experimented with slot antennas on cars? There are
>several places you could make this work, but I was thinking of a slot
>formed from wire (or copper tape) placed at the top inside of the rear
>window.

NASA uses one on the space shuttle for the SAREX stuff. They get contacts for 50-100 miles easily.

Joe Mack NA3T
mack@ncifcrf.gov

Date: 18 Apr 1994 17:18:34 GMT
From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!math.ohio-state.edu!magnus.acs.ohio-state.edu!peri.acs.ohio-state.edu!rdixon@network.ucsd.edu
Subject: Strange Coax Problem
To: ham-ant@ucsd.edu

I have a 100 foot length of coax running up my tower that has gone bad in some way I do not understand. Measured with an ohmmeter, both conductors show very low resistance. It measures infinite between conductors. Yet when a dummy load is placed

at one end, the SWR is greater than 3:1 on all HF bands. All test equipment is known to be good. Swapping ends makes no difference. It has UHF connectors, and screwing them back for inspection reveals no problems. No frayed connections, no water, etc. The connectors were always well taped. Bending the cable back and forth for some distance from both ends while making DC and SWR measurements shows no changes. The cable is Flexi X11 (RG8 type), and has worked fine for several years. It went bad gradually over several months, with the SWR slowly rising all this winter.

One suspicious place is there is a relatively sharp bend about 4 feet from one end. Yet straightening it and bending it back and forth at that spot and nearby makes no difference at all. In fact I cut off about 6 feet from that end and tested the long piece remaining and it is still bad.

I have now replaced the coax run with a new one that works fine, but this is the first time I have run into this strange failure.

Suggestions would be welcome.

Bob W8ERD

Date: 18 Apr 94 19:34:43 GMT
From: sdd.hp.com!col.hp.com!jwc@hplabs.hp.com
Subject: Strange Coax Problem
To: ham-ant@ucsd.edu

: Suggestions would be welcome.

: Bob W8ERD

Well Bob, if you can find a "TDR" (Time Domain Reflectometer) You will prob find at some point the coax has changed impedance to some low value. Due to a pinch or being zapped by lightning.

If you want to know bad enuff you can ship it here and I will run it by our TDR and let you know. (HI HI)

73 John, N0KIC

Date: Mon, 18 Apr 1994 18:24:54 GMT
From: ihnp4.ucsd.edu!usc!math.ohio-state.edu!cyber2.cyberstore.ca!nntp.cs.ubc.ca!
unixg.ubc.ca!news.mic.ucla.edu!nntp.club.cc.cmu.edu!cantaloupe.srv.cs.cmu.edu!
dolphin!ed@network.ucsd.edu
Subject: Strange Coax Problem
To: ham-ant@ucsd.edu

I have a 100 foot length of coax running up my tower that has gone bad in some way
I do not understand. Measured with an ohmeter, both conductors show very low
resistance. It measures infinite between conductors. Yet when a dummy load is
placed
at one end, the SWR is greater than 3:1 on all HF bands.

Yes I experienced same type of problem with 15' length of rg58 for 2m mobile app.

The coax failed at 144.000 with dummy load at end, but would work at 27mhz when
attached to dummy or in series with mobile antenna feed line. ???!

Replacing it corrected problem.

Ed
N3 I.T.M. In The Mail

Date: 19 Apr 1994 00:18:03 GMT
From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!howland.reston.ans.net!pipex!sunic!
umdac!fizban.solace.mh.se!news.ifm.liu.se!gerca@network.ucsd.edu
Subject: TH6DXX update to TH7DXX ?
To: ham-ant@ucsd.edu

I recall that I have seen information on an update kit for
the TH6DXX antenna. This kit should convert it to a TH7DXX.
Does anyone have any information on this kit ? Is it still
available ?

Thank you in advance,

Gert E B Carlsson

E-mail: gerca@lysator.liu.se

Computer Science and Engineering, Linkoping Institute of Technology

Date: 19 Apr 1994 00:48:53 GMT
From: ihnp4.ucsd.edu!swrinde!gatech!howland.reston.ans.net!vixen.cso.uiuc.edu!

prairienet.org!bpea@network.ucsd.edu
Subject: Will this work??
To: ham-ant@ucsd.edu

My backyard is 57'x85', not quit big enough to get that 204'
dipole up :-(
Instead of a dipole, I'm going to try putting a
vertical up. My question is, instead of running 100+ individual
ground wires out from the base of the vertical, can I lay
varying lengths of chicken wire out??

Will the chicken wire be a better ground plane than the individual
wires??

Thanks -

Bruce

End of Ham-Ant Digest V94 #111
